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ABSTRACT

This study related tax rate and per pupil revenue to residential assessed valuation, percent residential of total assessed valuation, and selected socioeconomic independent variables for school districts in Cook, DeKalb, DuPage, Kane, and Lake counties in Illinois. Findings suggest that for homeowners and the students of these counties in 1976, the combination of high percent of residential property and low per pupil value of residential property shows high tax rates and low per pupil revenue; that school revenues in all high residential percent districts may be lower than revenues in low residential percent districts; and that the Illinois reward for effort is, in essence, a system of reward for districts with high percentage of residential valuation. Yet, while the present system helps homeowners, it does not produce combined state and local revenue that can keep up with inflation. The guaranteed yield is frozen at less than $1,300 combined state and local revenue per pupil, while other districts with higher local resources can increase the local revenue to produce a combined yield of several hundred dollars per pupil unit above the state guarantee. (Author/IRT)

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RESIDENTIAL PROPERTY COMPOSITION OF SCHOOL DISTRICTS: ITS EFFECT ON TAX RATE AND PER PUPIL REVENUE

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This is the third of four studies sponsored by the National Conference of State Legislatures with funds provided by the National Institute of Education and by the Illinois School Problems Commission.

This report analyzes the effects of residential valuation of real estate property of high school, elementary school, and unit school districts in Cook, DeKalb, DuPage, Kane and Lake counties in Illinois on revenue per pupil and on tax rate for 1976.

Residential valuation data by school district is not currently available from any source. The data has been estimated from township data and census data by two computer programs. Therefore, the authors are indebted to the following individuals and offices for contributions to this process: Janet M. Cook, Ronald S. Halinski, James E. Lundeen, Robert R. Lundeen, Vernon C. Pohlmann, the Department of Local and Government Affairs, Springfield, Illinois, and the offices of the various county supervisors of assessments.

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The authors alone remain responsible for all errors of fact and/or opinion.

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THE PROBLEM AND ITS BACKGROUND

Statement of the Problem

The purpose of this study was to examine both tax rate and per pupil revenue in the Illinois general purpose grant-in-aid system in terms of residential property in school districts.

Clarification of the Problem Statement

The primary formula for state funding of school districts in Illinois is known as a "reward for effort" as well as a "resource equalizer" formula. As a "reward for effort" funding method, it was designed to reward local school districts for high or increased tax rates for education. As a "resource equalizer" funding method, it guarantees a uniform minimum level of assessed valuation of real property for each pupil unit, thus equalizing the taxable resources between districts. The method of counting pupil units is unique to this formula. As will be described, it has the effect of providing additional funds to school districts on the basis of the district's ratio of Title I eligible pupils, compared with the average state ratio.

The State of Illinois funds each school district that chooses this formula at its own tax rate, up to specified maximum rates, multiplied by the amount of assessed valuation in TWADA that the district lacks of the guaranteed assessed valuation; this method theoretically assures district power equalization. The basic goals of the legislature

that enacted this formula in 1973 were, first, to assure adequate educational funds for districts with inadequate taxing base (assessed valuation of property), and second, to reward local districts for effort to support education, both politically popular concepts in 1973. A third goal was to assist districts with high concentrations of poverty impacted pupils; a fourth goal was to make more funds available to elementary districts and to high school districts; and a fifth and major goal was to increase substantially the state support of local school districts.

To determine which districts have benefitted from this additional funding and new set of funding options, research in terms of the goals has been conducted annually by the Center for the Study of Educational Finance, Department of Educational Administration, at Illinois State University under the direction of Dr. G. Alan Hickrod and co-direction of Dr. Ben C. Hubbard.[1]

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[1]G. Alan Hickrod and Ben C. Hubbard, "Illinois State Finance Research: Some Knowns and Unknowns," a paper prepared for the Midwest Administration Center, University of Chicago, for the Conference on Dilemmas in School Finance: Illinois and the Nation, February 1977.

G. Alan Hickrod, Thomas Wei-Chi Yang, Ramesh Chaudhari and Ben C. Hubbard, Enrollment Change and Educational Personnel Change in the K-12 Schools of Illinois (Normal, Il.: Center for the Study of Educational Finance, Department of Educational Administration, Illinois State University, 1975).

G. Alan Hickrod and Ben C. Hubbard, "Research Agenda for School Finance Reform in Illinois," a paper prepared for the Illinois Office of Education, Research Report 1-HH-75, Center for the Study of Educational Finance, Department of Educational Administration, Illinois State University, Normal, Illinois 61761, August 1975.

G. Alan Hickrod and Ben C. Hubbard, The Concept of Fiscal Effort in the Illinois General Purpose Educational Grant-in-Aid: Some Legal and Measurement Problems (Normal, Il.: Center for the Study of Educational Finance, Department of Educational Administration, Illinois

Professors Hickrod and Hubbard have noted that there has been dissatisfaction with the use of the present specification of effort, the tax rate for operating purposes. It is possible that a school district in Illinois might have a cause for action based on a denial of the equal protection clause because equal operating tax rates do not necessarily mean equal tax effort. The measurement of effort is compounded by the varying criteria between counties in the classification of real estate for assessment purposes, not to mention the gross inequities in fractional assessments, which span a range of at least thirty-four percentage points within one county alone. Also, if "effort" is an appropriate criterion for the distribution of public school dollars, how can effort best be defined and measured? The present law defines effort as the tax rate for operating purposes.

Factors that will be correlated with tax rate and with per pupil revenue in a school district are percentage of residential property, value per TWADA of residential property, and various socioeconomic and fiscal variables.

State University).

G. Alan Hickrod, Ben C. Hubbard and Thomas Wei-Chi Yang, The 1973 Reform of the Illinois General Purpose Educational Grant-in-Aid: A Description and an Evaluation (Normal, Il.: Department of Educational Administration, Illinois State University).

G. Alan Hickrod, Ben C. Hubbard, Thomas W. C. Yang, and Tharin Rosanond, "The 1973 Reform of the Illinois General Purpose Grant-in-Aid: An Evaluation After Three Years," a report of the Center for the Study of Educational Finance, Department of Educational Administration, Illinois State University, Normal, Illinois 61761, November 1976.

G. Alan Hickrod, Thomas Wei-Chi Yang, Ben C. Hubbard and Ramesh Chaudhari, "Measurable Objectives for School Finance Reform: A Further Evaluation of the Illinois School Finance Reforms of 1973," a paper presented to the 1975 Annual Meeting of the American Educational Research Association, Washington, D.C., April 1975.

This study of residential components of school districts began with township assessment data classified by residential, commercial, industrial, farm and other, which is now available from a few counties. This data made possible the study of tax effort of residential homeowners in the school districts in five counties of the State of Illinois.

Definition of Terms

Socio-Economic Variables

Family—Two or more persons living in the same household who are related by blood, marriage or adoption.

Income—Sum of dollar amount of money earned in the preceding calendar year by persons fourteen years or older who constitute a family.

Median Family Income—Statistical median dollar level of family income (see above definitions).

Per Capita Income—Total personal income of persons fourteen years or older, divided by total population.

Urban Population—Persons living in incorporated communities, or in unincorporated places of 1,000 or more inhabitants.

Rural Population—Persons living in unincorporated places, or in open country.

Percent over $25,000 Income—Percent of families with annual income over $25,000.

Percent under $5,000 Income—Percent of families with annual income under $5,000.

Percent Children—Percent of population under eighteen years.

Percent Owner Occupied Housing—Percent owner-occupied of total housing units occupied year round or where residence has been established.

Percent College Educated—Percent of population 25 years and older with four years college education.

Percent Adults Under Eighth Grade Education—Percent of population 25 years and older with less than eight years of schooling.

Real Estate Property Classifications

Residential Property—refers to single, owner-occupied housing, and multi-unit housing under six units. In Cook County this classification includes farm property.

Farm Property—farmland and its buildings.

"Other" Property—primarily commercial and industrial property; includes all taxable real estate other than that herein described as residential or farm.

Finance and Tax Terminology

Equity—the equal treatment of equals and the unequal treatment of unequals.[2]

Fiscal Neutrality—"a state of affairs in which local district wealth will no longer determine the level of goods and services that are provided to students in an area as crucial to their life chances, and upward social mobility as is K-12 education."[3]

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[2]Robert Berne, "Equity and Public Education: Conceptual Issues of Measurement" (New York University, 1977), p. 2.

[3]G. Alan Hickrod, "Alternative Fiscal Solutions to Equity Problems in Public School Finance," School Finance in Transition (Gainesville, Fla.: University of Florida Institute for Educational Finance, 1975), p. 184.

Scope of the Study

This study related tax rate (a dependent variable) and per pupil revenue (a dependent variable) to residential assessed valuation (an independent variable), percent residential of total assessed valuation (an independent variable), and selected socioeconomic independent variables for school districts in Cook, DeKalb, DuPage, Kane, and Lake counties in the State of Illinois.

The residential property variables needed for the study are not available from any source. Township assessment data classified by residential, commercial, industrial, farm and other is now available from the four counties of DeKalb, DuPage, Kane, and Lake. Township assessment data classified by Class I, Class II, Class III, Class IV, and Class V is now available from Cook County.

School district residential assessment data were estimated from these township data. Because Cook County includes its small amount of farm property in "Class II—Residential" and because Cook County includes "commercial," "industrial," and "other" in its "Class V—Other" property classification, the following grouping was used for comparability with other counties: (1) residential, (2) farm (for counties other than Cook), and (3) other. This "other" category encompasses commercial, industrial, and miscellaneous for all counties. The specific output of the computational process, of residential assessed valuation and percent residential of total assessed valuation was the bases for statistical analyses in the study.

Given residential assessed valuation by township from the county supervisors of assessments of Cook, DeKalb, DuPage, Kane, and

Lake counties, the dollar amount of residential assessed valuation and the percent of residential assessed valuation of each school district was estimated by the following method.

Method for Estimating Residential Property Data

The "urban" population component and the "rural" population component of each census tract (or "minor civil division") of each township is labeled not only by township, but also by school district, on the School District Census data of Dr. Vernon Pohlmann. This data provided a basis for estimating school district data from township data. A single school district may lie entirely within one township, or it may cross township boundaries and include parts of two to twenty or more townships, showing an "urban population component" and a "rural population component" for its proportion of each of these townships.

This procedure calculated percent of urban population of a school district in a township and applied that percent to that township's residential property; this provided an estimate of the dollar amount of assessed residential property in that township in that school district. A running total was kept of residential property for all townships in the school district, and then a calculation was made to compute residential percent of total school district real estate valuation.

To compute percent of residential assessed valuation by school district, total assessed valuation was needed. Therefore, it was necessary to keep running totals of all classifications by a similar procedure. Rural population percents were used to estimate farm

assessed valuation. Urban population percents were used to estimate the category of "other" property, which is primarily commercial and industrial.

Although these calculations used assessed value rather than full market value for counties other than Cook County, it was necessary to bring Cook County classifications up to full market value for computation of percent of residential property of the total property. This was necessary because Cook County uses various fractions of full value for various classifications. (The 1970 Constitution of the State of Illinois provides that all counties with a population greater than 200,000 may apply fractional assessments to real estate classifications. Cook County uses this procedure.) Therefore, all Cook County assessment figures were calculated at full market value up to this stage of the computer program. At this point, the residential fraction of .17 was applied to the residential total of each Cook County school district, and the total fraction of one-third was applied to the total value of property in each Cook County school district.

Finally, the state's multipliers for individual counties were applied to the respective county's school districts. Residential value for Cook County school districts was multiplied by 1.4153. Residential value for DuPage County school districts was multiplied by 1.0806. Residential value for Lake County was multiplied by 1.0000. The application of the multipliers provided equalized assessed valuation for further statistical analyses. (See Appendix A.)

Questions to be Answered

H_1: The combination of (1) a high percentage of residential valuation and (2) a low value of residential property valuations per pupil does not have a depressing effect on tax rate and/or revenue per TWADA.

H_2: Median family income and residential valuation per TWADA are not positively correlated variables at a Pearson Product Moment level exceeding .75.

H_3: In the multivariate model expressed in Table 1, percentage of residential valuation does not have a negative linear relationship with tax rate and/or revenue per pupil.

H_4: In the multivariate model expressed in Table 1, residential valuation per TWADA does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_5: In the multivariate model expressed in Table 1, median family income does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_6: In the multivariate model expressed in Table 1, per capita income does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_7: In the multivariate model expressed in Table 1, percent of families over $25,000 income does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_8: In the multivariate model expressed in Table 1, percent of families under $5,000 income does not have a negative linear relationship with tax rate and/or revenue per pupil.

H_9: In the multivariate model expressed in Table 1, percent of children under age 18 does not have a negative linear relationship with tax rate and/or revenue per pupil.

H_{10}: In the multivariate model expressed in Table 1, percent of owner-occupied housing does not have a negative linear relationship with tax rate and/or revenue per pupil.

TABLE 1

SIMULTANEOUS MULTIPLE REGRESSION EQUATIONS

$$R_p = f(X_1) + f(X_2) + f(X_3) + f(X_4) + f(X_5) + f(X_6) + f(X_7) + f(X_8)$$

where

R_p = Revenue per TWADA

X_1 = percentage of residential valuation

X_2 = value of residential valuation/TWADA

X_3 = median family income

X_4 = per capita income

X_5 = percent of families over $25,000 income

X_6 = percent of families under $5,000 income

X_7 = percent of children under 18

X_8 = percent of owner-occupied housing

$$t = f(X_1) + f(X_2) + f(X_3) + f(X_4) + f(X_5) + f(X_6) + f(X_7) + f(X_8)$$

where

t = 1976 tax rate for operational purposes

X_1 = percentage of residential valuation

X_2 = value of residential valuation/TWADA

X_3 = median family income

X_4 = per capita income

X_5 = percent of families over $25,000 income

X_6 = percent of families under $5,000 income

X_7 = percent of children under 18

X_8 = percent of owner-occupied housing

Limitations

The data for this study were basically two estimated variables: (1) percent residential assessed valuation in a school district of total assessed valuation in the district, and (2) residential assessed valuation per TWADA in a school district. The process for making these estimations was worked out by desk calculator for the populations of unit school districts in the five counties of Cook, DeKalb, DuPage, Kane and Lake. Verification of the validity of the estimation process and resulting data was achieved through a comparison of the results by district with total lands and lots by district, as provided by the Illinois Department of Local Government Affairs.

Computer programs were subsequently developed to replicate the desk calculator worksheet process for the other two populations of school districts in the five counties, (1) high school districts, and (2) elementary school districts. Keypunched output of the residential percents and per pupil residential values of all three school district populations--elementary, high school, and unit--was used for the statistical analyses.

The two limitations of (1) estimated data and (2) five counties in one state should remind the reader that further research may either alter or substantiate the analyses and resulting implications for legislation.

Assumptions

1. The method described for estimation of total value of real property, residential percent of real property, and residential

valuation per TWADA, all by school district, is an appropriate method.

2. Real estate assessed valuation in Illinois counties has moved equally toward one-third of assessed valuation.

RELATED RESEARCH AND LITERATURE

Perhaps a more appropriate title for this chapter would be Proposition 13. A number of leading school finance researchers have dealt with a gnawing concern with the possible futility of financing public education with property taxes, and then attempting to develop equitable formulae for state subsidies where they are most needed. Some property taxes are paid out of the pockets of the poor, the elderly, the homeowner, the school district citizen who lives in a district lacking in expensive business or industrial property. California's poor, their elderly, their homeowners, in short, a winning majority of their voting school district citizens, danced to the tune played by Howard Jarvis and Paul Gann. The voters followed these pied pipers to the polling booths for the second-Tuesday-in-June primaries, June 6, 1978. They voted, as they had petitioned, to reduce property taxes to one percent of 1975 market values; to limit increases in assessed values to two percent per year; to risk the loss in public services that would follow a 57 percent decrease in local revenues in California when Proposition 13 becomes an amendment to the Constitution of the State of California on July 1, 1978, barring court action to the contrary before that date.

The real estate property tax problem has ceased to be academic. It is a terrible reality for California Governor Brown and the

legislators of the State of California. In a day it became a realistic threat to forty-nine other governors and state assemblies. In light of the realities of June 6 and their feared implications, let us observe some frustrations and concerns that have been voiced but perhaps ignored in the hope that they would go away.

Property levies not only tax many, many people too heavily, but fail to provide enough money for schools or enough resources--even with state aid--for equal educational opportunity.

Walter W. McMahon opened one of his 1977 papers by emploring:

> The wide inequality in expenditures per child among school districts in Illinois and the inevitable inequality in educational opportunity that results has serious implications for the later lives of the pupils involved and for the later problems society must face.[1]

Dr. McMahon proceeded to discuss the problems inherent in the dependency of per pupil expenditures on property (and, indirectly, on income wealth) before advocating the introduction of an income factor into the school aid formula.

The effort factor in the state formula would not be "t" (tax rate) or expressed another way $\frac{t_1 AV}{AV}$. This is the present specification of effort, where AV is assessed valuation. Rather, McMahon would propose:

$$t_2 = \frac{t_1 AV}{W} = \text{the effective tax rate}$$

where W is wealth, both current income and capital (or future income).[2]

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[1]Walter W. McMahon, "A Broader Measure of Wealth and Effort for Educational Equality and Tax Equity" (Champaign, Il.: University of Illinois), p. 1.

[2]McMahon, p. 65.

J. Dan Hou and G. Alan Hickrod presented a study of the relationship between assessed valuation and income, using a Median Family Income Index. This index is the ratio between district median family income and state median family income.[3] Income-weighted assessed valuation was shown to move every type of district in Illinois toward fiscal neutrality.[4]

In the saga of frustration over the fairness or unfairness of local financing of public education with local property taxes, California had previously shaken the nation when Mr. Serrano won his case in 1971 against Mrs. Priest who was then the treasurer of California, when the court declared that no, a child's education should not depend upon the property values of his parents' and neighbors' homes. The court said California must develop a school financing system employing wealth neutrality.

Lee Friedman describes the dilemma of conflicting and incompatible interpretations of satisfying the wealth neutrality concept of the Serrano decisions. The California Supreme Court's finding of December 30, 1976, that California's finance system makes the quality of a child's education depend upon the resources of his school district, and that a financing system free from this defect will be termed "wealth-neutral," "has not provided a clear test to distinguish wealth-neutral systems from offending systems." Friedman describes what he sees as a

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[3]J. Dan Hou and G. Alan Hickrod, "Effects of Selected Variables on the Distribution of Illinois State Aid to Education" (April 1976), p. 21.

[4]Hou and Hickrod, p. 3.

basic ambiguity between ex ante or ex post wealth neutrality: an ex post test of neutrality judges a system by its results in terms of expenditures per pupil in relation to some wealth measure, while ex ante wealth neutrality requires equal expenditures for equal effort. This effort factor is the tax rate, which is a questionable measure of real taxpayer effort without an income factor. The two tests or standards for judging wealth neutrality are incompatible, according to Friedman, unless a state were to move to full state funding, or to redistrict the state so that all school districts had the same wealth. Either measure seems extreme. Yet Californians may well have these extremes under current consideration.

Friedman and Michel Wiseman have developed their concepts of simple and conditional neutrality in school finance methods, and faced another frustrating dilemma when trying to determine the neutrality of finance systems in terms of the mandates of the Serrano court. By their own definitions of simple neutrality and conditional neutrality, a financing system cannot meet both standards. Friedman and Wiseman define simple neutrality as existing in a system where "potential recipients in a suspect group [a group of people who have been the victims of discrimination or of inequitable practices] should have the same chance for each share [of dollars] as do all other potential recipients." They define the concept of conditional neutrality to mean that "If the potential recipients in a suspect group had exceptional characteristics identical to those of other potential recipients,

then members of both groups should have the same chance for each share."[5] In other words, you cannot divide $100 between four children whose needs have different costs so that they all (1) received the same number of dollars and (2) received amounts proportionate to their needs. Californians have forced their lawmakers out of the frying pan of such controversies into the fire that burned up $7 billion of local government resources in one day. Local governments and state officials are left in the ashes, dismayed at the tragic choices left to them to provide services to the people they govern.

Helen Ladd's research dealing with the effects of classification of property on education expenditures and fiscal capacity led her to conclude that taxpayers are prone to vote higher taxes on residences than on industry, and higher taxes on business property than on residences. Industry tends to be wooed by local and state governments, and tended carefully once it has been won. Its handsome tax base provides generous resources at low tax rates, and high tax rates might cause the industrialists to pull up stakes and move to a new community with lower rates. Business is more stable, less transcient, less touchy, and heavily taxed, based on this piece of research.[6] Tough and shrewd leaders of big businesses in California did not support Proposition 13. As these businessmen well know, Proposition 13 will result in a beautiful

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[5]Lee S. Friedman and Michael Wiseman, "Toward Understanding the Equity Consequences of School Finance Reform" (The University of California, Berkeley, California, July 1977), pp. 10-12.

[6]Helen F. Ladd, "Local Education Expenditures, Fiscal Capacity, and the Composition of the Property Tax Base," National Tax Journal 28 (June 1975):145-157.

windfall to them and their stockholders--unless or until new business taxes are levied by the now-desperate state government.

Citizen taxpayer revolt is cropping up elsewhere. In the wake of the December 5, 1977, decision handed down by Judge Riley in the case of Cincinnati Board of Education et al. vs. Walter et al., a successful complaint by a taxpayer against the State Superintendent of Public Instruction, the State Board of Education, the Department of Education, and the Controlling Board, seeking a declaratory judgment that the statutory system of public school financing in Ohio is unconstitutional on grounds that it violates the "thorough and efficient" clause and the "equal protection and benefit" clause of the Ohio Constitution, taxpayers in Cleveland and Columbus, Ohio, joined the swelling ranks of stubborn taxpayers by voting against increased school taxes also on June 6, 1978.

Bruce Gensemer presented three alternative state aid proposals for Ohio to the annual meeting of the American Education Finance Association in March 1978. The immediate adoption of one of these alternatives, or of other alternatives, may be necessary for the continued operation of Ohio's public schools in its major cities. Basically, Dr. Gensemer's proposals to the General Assembly were: (1) abandon the Guaranteed Yield Formula in favor of full state assumption of all school financing; (2) continue to increase funding of the Guaranteed Yield Formula in its present form; (3) combine increased state funding with modifications in the Guaranteed Yield Formula.[7] A combination as in (3)

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[7]Bruce Gensemer, "Alternative Systems for Distributing State Aid to Schools: Choices in Ohio" (March 1978), p. 10.

above has been recommended by William Harrison and the Education Review Committee of the Ohio legislature.

Friedman's dichotomy--either full state funding of public education or major changes in school district boundaries--may well be future realities toward which a state may choose to move in an orderly fashion to achieve wealth neutrality by any standard.

Robert Berne's equity paper of October 1977 deals with incompatible fairness goals in terms of "equity" and "equality." Berne's definition of equity "rests on the idea that an equitable situation is one in which equals are treated equally, . . . and in which unequals are treated unequally."[8] He sees the need to admit the value-judgment aspects of trying to determine what is or is not equitable; these values apply to the variables of educational needs, technological characteristics of the districts, ability to pay, and an urban classification.[9] He sees the need to think and work in terms of alternative approaches in working toward equity. Approaching equity is a complex task with a range of possible "correct" points of view.

> This issue is really a dual problem: first, do we want dollars, resources, or outputs to be equitable and second, how do we measure these various concepts. . . . It appears that different arguments of an equity criteria lead to somewhat different conclusions so that the energy needed to pursue a multiple approach is justifiable, at present.[10]

California's choices are suddenly fewer, with less needed time and flexibility to work toward a somewhat universally accepted notion of equal

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[8]Robert Berne, "Equity and Public Education: Conceptual Issues of Measurement"(New York Univ., 1977), p. 2.

[9]Berne, p. 36.

[10]Berne, p. 67.

treatment of equals.

Why the California-centered discussion of school finance and property tax literature in this paper that has analyzed expenditures and tax rates in relation to residential property in five Illinois counties?

The power establishment of elected officials, businessmen, industrialists, researchers, professors, etc. works diligently and conscientiously--up to a point--to provide public services including public education. Those in power guard their power and, unfortunately, some have abused power some of the time, as we all well know in the wake of Watergate, Korean influence buying, and so on. Generalizing from the published scandals, many people may believe that most of those who hold authority and/or money guard their own interests a great deal of the time. Combined with this credibility gap between the taxers and the taxees is a rapid rate of inflation in general, and sharply rising property values in particular. Add to this the realities of a credit economy, where many, perhaps most families are financially extended to the limit of their credit capacities. Then consider the profit squeeze for apartment owners faced with higher tax bills and the choice between raising rents and losing renters or not raising rents and losing profits--a no-win situation. Take one president of an apartment owners group, Mr. Howard Jarvis, and one real estate agent with related financial dilemmas, Mr. Paul Gann. Add 1,500,000 signatures to their petition in California to put Proposition 13 on the June primary ballot, and enough votes to pass Proposition 13 by approximately two yes votes to one no vote. Result: one jubilant bandwagon with plenty of room for

more states to jump on in November. The winning faction in California is ready, willing and eager to provide any needed advice and help for like-minded people in other states.

The message is clearly related to the statistical questions of this study. Does the percentage of residential composition of school districts bear a relationship to property tax rates? to educational expenditures?

Here is the message of June 6, 1978:

> Proposition 13, an amendment to the California state constitution, limits annual property taxes to 1 percent of their market value. The current average is 2.5 percent, with taxes ranging from 1 to 3 percent.
>
> The average California homeowner's property is valued at $60,000, with taxes of $1,400 a year. The amendment would cut the tax bill to an average of $600.
>
> The measure also rolls back assessments to their 1975 levels and limits future increases to 2 percent a year, except when property is sold. Assessments in many areas have doubled in recent years.
>
> TAX LIMITATION--initiative constitutional amendment. Limits realty tax to 1 percent; increases to 2 percent. Imposes two-thirds voting requirement on new taxes. Financial impact: commencing with fiscal year beginning July 1, 1978, would result in annual losses of local government property tax revenues (approximately $7 billion in 1978-79 fiscal year), reduction in annual state costs (approximately $600 million in 1978-79 fiscal year), and restriction on future ability of local governments to finance capital construction by sale of general obligation bonds.[11]

California Governor Edmund G. Brown, Jr., had vigorously opposed Proposition 13 in its early and middle stages, knowing the drastic, arbitrary nature of the measure, and knowing the true hardship it would bring to the state and to the local governments. However, he faced its reality immediately. "The people have spoken very clearly. There will

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[11]"Here's Text of Proposal to Limit Taxes," Chicago Tribune, 8 June 1978, sec. 1, p. 14.

be no new state taxes and we must put a lid on government spending."[12]

Governor Brown signed an executive order the day after Proposition 13 had passed, "immediately freezing all hiring and job replacements by the State of California as a result of passage of Proposition 13, which cuts property taxes by up to 57 percent. . . . Brown said the estimated $5 billion surplus in the state treasury would be allocated to cities, counties, and school districts in the most practical way possible."[13]

The success of Proposition 13 is viewed by some people as the beginning step of a larger tax revolt. "The passage of a sweeping property tax cut plan in California will make things easier for supporters of similar moves in other states. Several groups are collecting petitions to get a measure on the November ballot limiting property taxes to 1 percent of market value."[14]

The campaign for and against Proposition 13 was described as "wild." Those who feared the measure predicted widespread layoffs of teachers, firefighters, and police, and closing of schools, libraries and parks and even darkened street lights. Those favoring the measure said, "Don't let the politicians scare you."[15]

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[12]"Californians Cut Property Taxes by $7 Billion," St. Louis Post-Dispatch, 7 June 1978, sec. 1, p. 1.

[13]"California Begins State Job Freeze," Chicago Tribune, 8 June 1978, sec. 1, pp. 1, 14.

[14]"Tax Revolt Expected to Spread," News-Tribune (LaSalle, Peru, Oglesby, Spring Valley, Illinois), 7 June 1978, p. 1.

[15]St. Louis Post-Dispatch, 7 June 1978, p. 20.

The political ramifications of Proposition 13 in other states are being watched closely and are the subject of controversy and intense interest. Democratic National Chairman John C. White said to the St. Louis Post-Dispatch, "There is no doubt that unless we show substantial restraint in spending at all levels, federal, state and local--we are going to see a national taxpayers revolt. We're going to have tax reform one way or another."[16]

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[16]Thomas W. Ottenad, "Tax Revolt," St. Louis Post-Dispatch, 7 June 1978, sec. 1, p. 1.

RESEARCH DESIGN AND PROCEDURES

A cross-classification was conducted for each population of school districts. H_1 of the Questions to be Answered:

> The combination of (1) a high percentage of residential valuation and (2) a low value of residential property valuations per pupil does not have a depressing effect on tax rate and/or revenue per TWADA.

was answered, not only for the above block of districts in each population, but for the other three cells of each population as well. See Tables 2, 3, and 4 and the accompanying discussion in the Data Analysis section. The specific school districts that fall within each cell for each population (in these estimation procedures, which may cause one or more districts to be mislabeled) are presented in Appendix D, High School Districts, Appendix E, Elementary School Districts, and Appendix F, Unit School Districts.

Simultaneous multiple regression analyses were conducted for each population of school districts. See Table 1 for the two basic equations. In the first equation, Revenue per TWADA was the dependent and the independent variables were (1) percentage of residential valuation, (2) value of residential valuation/TWADA, (3) median family income, (4) per capita income, (5) percent of families over $25,000, (6) percent of families under $5,000 income, (7) percent of children under 18, and (8) percent of owner-occupied housing. In the second equation, 1976 tax rate for operating purposes was the dependent variable and the

TABLE 2

CROSS-CLASSIFICATION
HIGH SCHOOL DISTRICTS N = 45

	Group 1: Low Residential Val. (under $20,000 per TWADA)	Group 2: High Residential Val. (over $20,000 per TWADA)
Low Residential Percent (under 70%)	$\bar{X}$ Median family income.....$13,694 $\bar{X}$ % Residential assessed valuation.....52% $\bar{X}$ Residential assessed valuation total.$156,559,063 $\bar{X}$ Residential assessed valuation per TWADA..$23,047 $\bar{X}$ % Families under $5,000 income.....6% $\bar{X}$ % owner occupied housing.....76% $\bar{X}$ Tax rate 1976.....1.6814% $\bar{X}$ Combined state and local revenue per TWADA.....$1,478 N=12	$\bar{X}$ Median family income.....$12,992 $\bar{X}$ % Residential assessed valuation.....64% $\bar{X}$ Residential assessed valuation total.$147,107,000 $\bar{X}$ Residential assessed valuation per TWADA..$38,516 $\bar{X}$ % Families under $5,000 income.....8% $\bar{X}$ % owner occupied housing.....72% $\bar{X}$ Tax rate 1976.....1.6879% $\bar{X}$ Combined state and local revenue per TWADA.....$1,424 N=11
High Residential Percent (over 70%)	$\bar{X}$ Median family income.....$13,407 $\bar{X}$ % Residential assessed valuation.....75% $\bar{X}$ Residential assessed valuation total.$151,278,500 $\bar{X}$ Residential assessed valuation per TWADA..$23,266 $\bar{X}$ % Families under $5,000 income.....7% $\bar{X}$ % owner occupied housing.....77% $\bar{X}$ Tax rate 1976.....1.8615% $\bar{X}$ Combined state and local revenue per TWADA.....$1,313 N-11	$\bar{X}$ Median family income.....$16,267 $\bar{X}$ % Residential assessed valuation.....78% $\bar{X}$ Residential assessed valuation total.$232,964,875 $\bar{X}$ Residential assessed valuation per TWADA..$43,775 $\bar{X}$ % Families under $5,000 income.....6% $\bar{X}$ % owner occupied housing.....74% $\bar{X}$ Tax rate 1976.....1.7889% $\bar{X}$ Combined state and local revenue per TWADA.....$1,347 N=11

TABLE 3

CROSS-CLASSIFICATION
ELEMENTARY DISTRICTS N = 180

	Group 1: Low Residential Val. (under $20,000 per TWADA)	Group 2: High Residential Val. (over $20,000 per TWADA)
Low Residential Percent (under 70%)	$\bar{X}$ % Residential assessed valuation.....42% $\bar{X}$ Residential assessed value total.....$23,714,863 $\bar{X}$ Residential assessed value per TWADA.....$9,808 $\bar{X}$ Per capita income...$4,035 $\bar{X}$ % Adults under 8th grade education.....20% $\bar{X}$ % Children under 18 years.....14% $\bar{X}$ Tax rate 1976.....1.7495% $\bar{X}$ Combined state & local revenue per TWADA.....$1,336 N=45	$\bar{X}$ % Residential assessed valuation.....62% $\bar{X}$ Residential assessed value total.....$42,443,477 $\bar{X}$ Residential assessed value per TWADA.....$28,203 $\bar{X}$ Per capita income $4,295 $\bar{X}$ % Adults under 8th grade education.....18% $\bar{X}$ % Children under 18 years.....14% $\bar{X}$ Tax rate 1976.....1.8972% $\bar{X}$ Combined state & local revenue per TWADA....$1,424 N=44
High Residential Percent (over 70%)	$\bar{X}$ % Residential assessed valuation.....75% $\bar{X}$ Residential assessed value total.....$33,143,785 $\bar{X}$ Residential assessed value per TWADA.....$13,158 $\bar{X}$ Per capita income...$3,649 $\bar{X}$ % Adults under 8th grade education.....19% $\bar{X}$ % Children under 18 years.....15% $\bar{X}$ Tax rate 1976.....1.9235% $\bar{X}$ Combined state and local revenue per TWADA.....$1,248 N=42	$\bar{X}$ % Residential assessed valuation.....78% $\bar{X}$ Residential assessed value total.....$67,590,813 $\bar{X}$ Residential assessed value per TWADA.....$30,814 $\bar{X}$ Per capita income..$5,217 $\bar{X}$ % Adults under 8th grade education.....15% $\bar{X}$ % Children under 18 years.....14% $\bar{X}$ Tax rate 1976.....2.0612% $\bar{X}$ Combined state & local revenue per TWADA....$1,325 N=49

TABLE 4

CROSS-CLASSIFICATION
UNIT DISTRICTS N = 32

	Group 1: Low Residential Val. (under $10,000 per TWADA)	Group 2: High Residential Val. (over $10,000 per TWADA)
Low Residential Percent (under 63%)	$\bar{X}$ Median family income.....$10,949 $\bar{X}$ % Residential assessed valuation.....29% $\bar{X}$ Residential assessed valuation total..$55,332,703 $\bar{X}$ Residential assessed valuation per TWADA...$5,347 $\bar{X}$ % children under 18....14% $\bar{X}$ Tax rate 1976.....2.6510% $\bar{X}$ Combined state & local revenue per TWADA.....$1,166 N=11	$\bar{X}$ Median family income.....$12,483 $\bar{X}$ % Residential assessed valuation.....57% $\bar{X}$ Residential assessed valuation total..$107,136,250 $\bar{X}$ Residential assessed valuation per TWADA...$13,606 $\bar{X}$ % children under 18.....13% $\bar{X}$ Tax rate 1976.....3.0598% $\bar{X}$ Combined state & local revenue per TWADA.....$1,231 N= 4
High Residential Percent (over 63%)	$\bar{X}$ Median family income.....$12,824 $\bar{X}$ % Residential assessed valuation.....75% $\bar{X}$ Residential assessed valuation total..$84,486,188 $\bar{X}$ Residential assessed valuation per TWADA...$8,590 $\bar{X}$ % children under 18....15% $\bar{X}$ Tax rate 1976.....2.8018% $\bar{X}$ Combined state & local revenue per TWADA.....$1,111 N= 5	$\bar{X}$ Median family income.....$12,964 $\bar{X}$ % Residential assessed valuation.....72% $\bar{X}$ Residential assessed valuation total...$96,372,875 $\bar{X}$ Residential assessed valuation per TWADA...$17,904 $\bar{X}$ % children under 18.....15% $\bar{X}$ Tax rate 1976.....3.0093% $\bar{X}$ Combined state & local revenue per TWADA.....$1,203 N=12

independent variables were the same eight as in the first equation.

These simultaneous regression analyses were the bases for answers to H_2, H_3, H_4, H_5, H_6, H_7, H_8, H_9, and H_{10} of the Questions to be Answered, recapped as follows:

H_2: Median family income and residential valuation per TWADA are not positively correlated variables at a Pearson Product Moment level exceeding .75.

H_3: In the multivariate model expressed in Table 1, percentage of residential valuation does not have a negative linear relationship with tax rate and/or revenue per pupil.

H_4: In the multivariate model expressed in Table 1, residential valuation per TWADA does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_5: In the multivariate model expressed in Table 1, median family income does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_6: In the multivariate model expressed in Table 1, per capita income does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_7: In the multivariate model expressed in Table 1, percent of families over $25,000 income does not have a positive linear relationship with tax rate and/or revenue per pupil.

H_8: In the multivariate model expressed in Table 1, percent of families under $5,000 income does not have a negative linear relationship with tax rate and/or revenue per pupil.

H_9: In the multivariate model expressed in Table 1, percent of children under age 18 does not have a negative linear relationship with tax rate and/or revenue per pupil.

H_{10}: In the multivariate model expressed in Table 1, percent of owner-occupied housing does not have a negative linear relationship with tax rate and/or revenue per pupil.

See Tables 5, 6, and 7 for summaries of these simultaneous multiple regression analyses for the three populations of high school districts, elementary school districts, and unit school districts.

Stepwise multiple regression analyses were then conducted for each population of school districts to determine which variable or combination of variables used in the study might best account for the maximum predictable variance in revenue per TWADA for each of the three study populations. Stepwise analyses were likewise conducted to analyze maximum predictable variance in 1976 tax rate for operating purposes. See Tables 8, 9, and 10 for summaries of these stepwise multiple regression analyses for the three populations of high school districts, elementary school districts, and unit school districts.

TABLE 5

HIGH SCHOOL DISTRICTS N=45
SIMULTANEOUS MULTIPLE REGRESSION SUMMARY

Independent Variables	Multiple R	R Square	Simple R	Beta
a) Dependent Variable: Revenue per TWADA				
Percent Owner-Occupied Housing	0.12770	0.01631	0.12770	-0.21986
Percent Residential Valuation	0.13611	0.01853	-0.04764	-0.03682
Residential Assessed Valuation per TWADA	0.14076	0.01981	-0.06846	-0.13002
Median Family Income	0.48672	0.23690	0.41337	1.04456
Per Capita Income	0.48707	0.23724	0.39490	-1.71225
Percent of Families over $25,000 Income	0.50942	0.25951	0.36665	0.97468
Percent of Families under $5,000 Income	0.53494	0.28616	-0.44026	-0.40497
Percent of Children Under Age Eighteen	0.63553	0.40389	-0.20862	-0.62325
b) Dependent Variable: Tax Rate 1976				
Percent Owner-Occupied Housing	0.21428	0.04592	0.21428	-0.04138
Percent Residential Valuation	0.44470	0.19775	0.38880	0.40252
Residential Assessed Valuation per TWADA	0.46489	0.21612	-0.05620	-0.23472
Median Family Income	0.60312	0.36375	0.50419	0.61281
Per Capita Income	0.60431	0.36519	0.46851	-1.19623
Percent of Families over $25,000 Income	0.60432	0.36520	0.46759	0.90199
Percent of Families under $5,000 Income	0.61070	0.37296	-0.39004	-0.22217
Percent of Children Under Age Eighteen	0.64359	0.41420	0.00963	-0.36889

TABLE 6

ELEMENTARY SCHOOL DISTRICTS N=180
SIMULTANEOUS MULTIPLE REGRESSION SUMMARY

Independent Variables	Multiple R	R Square	Simple R	Beta
a) Dependent Variable: Revenue per TWADA				
Percent Owner-Occupied Housing	0.04266	0.00182	0.04266	0.14736
Percent Residential Valuation	0.14451	0.02088	0.14022	0.06928
Residential Assessed Valuation per TWADA	0.16355	0.02675	0.11812	-0.04747
Median Family Income	0.32201	0.10369	0.31242	-0.07972
Per Capita Income	0.34970	0.12229	0.34270	0.01393
Percent of Families over $25,000 Income	0.34989	0.12242	0.31131	0.31128
Percent of Families under $5,000 Income	0.38548	0.14859	-0.25454	-0.15417
Percent of Children Under Age Eighteen	0.44274	0.19602	-0.20034	-0.34749
b) Dependent Variable: Tax Rate 1976				
Percent Owner-Occupied Housing	0.11340	0.01286	0.11340	-0.14665
Percent Residential Valuation	0.33086	0.10947	0.31659	0.18922
Residential Assessed Valuation per TWADA	0.34305	0.11768	0.18888	0.01079
Median Family Income	0.51117	0.26129	0.47187	0.15607
Per Capita Income	0.51353	0.26371	0.41695	-0.16108
Percent of Families over $25,000 Income	0.55131	0.30394	0.50492	0.46731
Percent of Families under $5,000 Income	0.55138	0.30402	-0.19235	-0.01307
Percent of Children Under Age Eighteen	0.55994	0.31354	0.14955	0.15564

TABLE 7

UNIT SCHOOL DISTRICTS N=32
SIMULTANEOUS MULTIPLE REGRESSION SUMMARY

Independent Variables	Multiple R	R Square	Simple R	Beta
a) Dependent Variable: Revenue per TWADA				
Percent Owner-Occupied Housing	0.03500	0.00123	0.03500	-0.31380
Percent Residential Valuation	0.17534	0.03074	-0.14377	-0.48457
Residential Assessed Valuation per TWADA	0.21266	0.04522	0.01378	0.07569
Median Family Income	0.49400	0.24404	0.33832	1.16863
Per Capita Income	0.56411	0.31823	0.20606	-0.82470
Percent Families Over $25,000 Annual Income	0.58762	0.34530	0.22795	-0.15283
Percent Families Under $5,000 Annual Income	0.65634	0.43079	-0.34313	-0.57671
Percent Children Under Age Eighteen	0.66755	0.44563	0.01403	-0.18409
b) Dependent Variable: Tax Rate 1976				
Percent Owner-Occupied Housing	0.17450	0.03045	0.17450	-0.24836
Percent Residential Valuation	0.38665	0.14950	0.38596	0.20096
Residential Assessed Valuation per TWADA	0.41739	0.17421	0.37171	0.07525
Median Family Income	0.69518	0.48327	0.60721	1.64543
Per Capita Income	0.73418	0.53902	0.47436	-0.91194
Percent Families Over $25,000 Annual Income	0.73419	0.53903	0.51643	0.16328
Percent Families Under $5,000 Annual Income	0.73460	0.53964	-0.52535	0.11951
Percent Children Under Age Eighteen	0.79566	0.63307	0.03720	-0.46193

TABLE 8

HIGH SCHOOL DISTRICTS N=45
STEPWISE MULTIPLE REGRESSION SUMMARY

Independent Variables	Multiple R	R Square	Simple R	Beta
a) Dependent Variable: Revenue per TWADA				
Percent Owner-Occupied Housing	0.12770	0.01631	0.12770	-0.17304
Percent Residential Valuation	0.13611	0.01853	-0.04764	-0.08459
Residential Assessed Valuation per TWADA	0.15847	0.02511	0.02995	0.08018
Median Family Income	0.46523	0.21644	0.41337	1.01472
b) Dependent Variable: 1976 Tax Rate				
Median Family Income	0.50419	0.25421	0.50419	0.54600
Percent Residential Valuation	0.55954	0.31308	0.38880	0.38657
Percent Families Under $5,000 Income	0.57160	0.32673	-0.39004	-0.26996
Residential Assessed Valuation per TWADA	0.58060	0.33709	0.12313	-0.08519

TABLE 9

ELEMENTARY SCHOOL DISTRICTS N=180
STEPWISE MULTIPLE REGRESSION SUMMARY

Independent Variables	Multiple R	R Square	Simple R	Beta
a) Dependent Variable: Revenue Per TWADA				
Per Capita Income	0.34270	0.11744	0.34270	0.21325
Residential Assessed Valuation per TWADA	0.38666	0.14950	0.30271	0.17989
Percent of Children Under Age Eighteen	0.41267	0.17030	-0.20034	-0.17019
Percent Adults Less than 8th Grade Educ.	0.41677	0.17369	-0.18144	-0.07625
Percent Residential Valuation	0.41688	0.17379	0.14022	-0.01191
b) Dependent Variable: 1976 Tax Rate				
Percent Adults Less than 8th Grade Educ.	0.45772	0.20951	-0.45772	-0.29993
Percent Residential Valuation	0.53349	0.28461	0.31659	0.31505
Per Capita Income	0.55046	0.30300	0.41695	0.24367
Residential Assessed Valuation per TWADA	0.56645	0.32086	0.15382	-0.15594
Percent of Children Under Age Eighteen	0.56927	0.32407	0.14955	0.06306

TABLE 10

UNIT SCHOOL DISTRICTS N=32
STEPWISE MULTIPLE REGRESSION SUMMARY

Independent Variables	Multiple R	R Square	Simple R	Beta
a) Dependent Variable: Revenue per TWADA				
Residential Assessed Valuation per TWADA	0.39916	0.15933	0.39916	0.23134
Median Family Income	0.42217	0.17823	0.32033	0.29217
Percent Children in Population	0.45581	0.20776	-0.06272	-0.21145
Percent Residential Assessed Valuation	0.45635	0.20825	0.24247	0.02772
b) Dependent Variable: Tax Rate 1976				
Median Family Income	0.59896	0.35876	0.59896	0.56043
Percent Children in Population	0.66885	0.44736	0.02628	-0.29956
Percent Residential Assessed Valuation	0.70111	0.49155	0.49486	0.20922
Residential Assessed Valuation per TWADA	0.70817	0.50151	0.53181	0.13194

DATA ANALYSIS

1. While the combination of high percent of residential valuation and low value of residential property per TWADA does not have a depressing effect on tax rate (Table 1), this combination does, in fact, have a depressing effect on revenue, producing the lowest combined state and local revenue per TWADA in each school district population:

High school districts.....$1,313
Elementary school districts.....$1,248
Unit school districts.....$1,111

See Tables 2, 3 and 4. The effect of this combination of high percent of low value residential property has a positive effect on tax rate; there is some evidence that this group makes a monumental tax effort, as will be discussed in (3) below, as well as in the summary.

2. The correlation of median family income(and of per capita income) with residential value per pupil is:

District Type	Median Family Income	Per Capita Income
High school districts	.21	.28
Elementary school districts	.31	.34
Unit school districts	.41	.36

3. A high percent of residential property in these three populations of district consistently spells higher tax rates than are found in the districts with low percent of residential property. This trend is noted in the cross-classifications (with the exception of high tax rates found in low residential percent, high residential value unit districts). See Tables 2, 3 and 4. This trend is confirmed in the regression

studies. See Tables 5, 6 and 7. These high tax rates do not result in high revenues where there is a high percent of residential property per district, as noted in (1) above. In each population of school districts, only the two groups of districts with low residential PERCENT have high per pupil revenue. See Tables 2, 3 and 4.

Therefore high residential percent districts suffer from the point of view of the taxpaying homeowner. The high residential percent groups make the highest tax effort to receive only the lowest per pupil revenue. [Referring again to Tables 2, 3 and 4, while the high residential value, high residential percent districts make the very highest average effort for elementary districts, and second highest tax effort for high school and unit districts, even the low residential value, high residential percent groups ("poor suburbs") tax themselves heavily in elementary and in unit districts, and make the highest tax effort in the high school districts. These low property value residential communities pay real estate taxes for elementary education that averages $1.92 per $100 assessed valuation. This is .0235 more than even the state will match. They are receiving an average combined state and local revenue of $1,248 per TWADA. This is less than the $1,260 per TWADA combined revenue that the state guarantees under full funding for $1.90 per $100 assessed valuation.] All groups of high school districts tax themselves far beyond the state's matching rate for high school districts, not benefitting from the "reward for effort" formula for the portion of tax rate in access of $1.05 per $100 assessed valuation. The state funds each high school district at its own tax rate up to the high school district maximum of $1.05 per $100 assessed valuation. (See Appendix C.)

Table 2 shows that the resource equalizer formula does not benefit the total efforts of taxpayers in these high school districts.

Description of Districts	Tax Rates	Excess Tax Rates That Are Not Rewarded
low residential value, low residential percent districts' average tax	= $1.68/$100	$.63/$100
high residential value, low residential percent districts' average tax	= $1.69/$100	$.64/$100
low residential value, high residential percent districts' average tax	= $1.86/$100	$.81/$100
high residential value, high residential percent districts' average tax	= $1.79/$100	$.74/$100

Items (4) through (10) refer to results in the simultaneous multiple regression analyses summarized in Tables 5, 6 and 7.

4. Higher value of residential property per TWADA shows for:

   high school districts—a depressing effect (β = -.23472) on tax rates and a depressing effect (β = -.13002) on revenue;

   elementary school districts—a slight positive effect (β = .01079) on tax rates and a very slight depressing effect (β = -.04747) on revenue;

   unit school districts—a slight positive effect (β = .07525) on tax rate and a slight positive effect (β = .07569) on revenue.

5. Median family income shows for:

   high school districts—a positive effect (β = .61281) on tax rate and a positive effect (β = 1.04456) on revenue;

   elementary school districts—a positive effect (β = .15607) on tax rate and a negative effect (β = -.07972) on revenue;

   unit school districts—a positive effect (β = 1.64543) on tax rate and a positive effect (β = 1.16863) on revenue.

6. Per capita income shows for:

   high school districts--a negative effect (β = -1.19623) on tax rate and a negative effect (β = -1.71225) on revenue;

   elementary school districts--a negative effect (β = -.16108) on tax rate and a positive effect (β = .01393) on revenue;

   unit school districts--a negative effect (β = -.91194) on tax rate and a negative effect (β = -.82470) on revenue.

7. Percent of families over $25,000 income shows for:

   high school districts--a positive effect (β = .90199) on tax rate and a positive effect (β = .97468) on revenue;

   elementary school districts--a positive effect (β = .46731) on tax rate and a positive effect (β = .31128) on revenue;

   unit school districts--a positive effect (β = .16328) on tax rate and a negative effect (β = -.15283) on revenue.

8. Percent of families under $5,000 income shows for:

   high school districts--a negative effect (β = -.22217) on tax rate and a negative effect (β = -.40497) on revenue;

   elementary school districts--a negative effect (β = -.01307) on tax rate and a negative effect (β = -.15417) on revenue;

   unit school districts--a positive effect (β = .11951) on tax rate and a negative effect (β = -.57671) on revenue.

9. Percent of children under age eighteen shows for:

   high school districts--a negative effect on tax rate (β = -.36889) and a negative effect (β = -.62325) on revenue;

   elementary school districts--a positive effect (β = .15564) on tax rate and a negative effect (β = -.34749) on revenue;

unit school districts--a negative effect (β = -.46193) on tax rate and a negative effect (β = -.18409) on revenue.

10. Percent of owner-occupied housing shows for:

high school districts--a slight negative effect (β = -.04138) and a negative effect (β = -.21986) on revenue;

elementary school districts--a negative effect (β = -.14665) on tax rate and a positive effect (β = .14736) on revenue;

unit school districts--a negative effect (β = -.24836) on tax rate and a negative effect (β = -.31380) on revenue.

Optional variables were selected for stepwise regression analyses by three major criteria:

(1) an income factor that would account for maximum variance of tax rate and of revenue;

(2) the use of residential percent and of residential assessed valuation per TWADA as two variables, to make comparisons between groups of districts more meaningful; these variables become the common denominators;

(3) the elimination of redundant variables; that is, variables that correlate with each other more than .75.

Tables 8, 9, and 10 reveal that higher percent of residential property in each population of school districts is associated consistently with higher tax rates for school operating purposes in 1976.

Residential percent has less effect on revenue than on tax rate. While high residential percent is associated with lower revenue in most of the analyses in this study, this variable contributes a slight positive effect on revenue in elementaries and in units after the contributions of income variables in the stepwise regressions summarized in

Tables 9 and 10. High residential percent is associated with lower revenue in the high schools (Table 8).

However, the effect of residential value on tax rate and the revenue realized are less predictable from the residential property base. We have observed that the combination of high residential percent and low value of residential property per TWADA (Tables 2, 3, and 4) shows not only higher taxes for high schools and elementaries, but consistently lower revenue. Higher residential value per weighted pupil shows higher revenue in the cross-classifications and in the regression studies. We have also observed in the stepwise regressions that aggregate residential assessed valuation is very highly correlated with other district size measures, such as TWADA, and that one or the other of these size factors is associated with high tax burden.

Residential value per weighted pupil in the stepwise regressions seems to be associated not only with a positive effect on revenue (Table 7a), but with a depressing effect on 1976 tax rate with the combinations of variables shown in Tables 8 and 9 for high schools and elementaries. Higher median family income predicts higher tax rates and higher revenues for high school districts and for unit districts. Higher per capita income predicts higher tax rates and higher revenues for elementary districts.

SUMMARY AND IMPLICATIONS

Percents of residential property and residential property values per TWADA in the 45 high school districts, the 180 elementary school districts, and the 32 unit districts in Cook, DeKalb, DuPage, Kane and Lake counties were estimated from township data.

Percent of residential property in a school district appears to have a strong positive effect on 1976 tax rate for school operating purposes, and when analyzed with residential value per TWADA, to have a depressing effect on combined state and local revenue per TWADA.

A number of variables, especially high residential percent and high median family income, contribute to the high tax rate (effort) on the part of these particular Illinois citizens to educate children. People in these residential districts are taxing themselves substantially for the K-8 schools.

Revenues in high residential percent districts, both high-value and low-value per TWADA, are lower than revenues in low residential percent districts. Other property classifications, such as commercial, industrial, and farm, provide a tax base in these districts that appears to be more beneficial than residential property base to the school revenues.

These findings based on statistical estimations of residential property classification of real property may suggest:

1. a circuit-breaker for low-income residential homeowners;

2. raising the maximum tax rates which the state will match. This is a very unlikely possibility for the representatives of most districts, but an attractive thought for districts that already have high rates and low values.

3. building a case to limit the taxing base of school districts to residential property, giving the state the power to tax other property classifications, increasing the level of state funding to a higher percent of the combined state and local revenue;

4. that the Illinois "reward for effort" system is, in essence, a system of reward for districts with high percentages of residential valuations, e.g., "aid to the homeowners."

Considering the California tax revolt on June 6, 1978, more far-reaching measures are being discussed by more state legislatures. It is clear that state governments and the United States government have been forced to deal seriously and immediately with the problems of revenue sources. California taxpayers have said they will no longer assume $12 billion worth of local government funding responsibility. The current $12 billion level will drop to $5 billion on July 1 by their vote. This study indicates that taxpayers in heavily residential school districts in five counties in Illinois do assume educational responsibility. But—they raise only low revenues for schools with very high tax rate effort. The threat of a more widespread tax revolt reduces the implications of this and related studies to very basic considerations on the part of legislative bodies at all governing levels. The tax revolt threat has forced governing officials to reconsider--as clearly, quickly, and accurately as possible--the appropriate responsibilities of the: (1) local municipalities; (2) local school districts; (3) state government; and (4) federal government, in areas of collecting revenue and providing public services.

"Property tax relief" is a major theme of the particular session of the Illinois General Assembly which is about to conclude as this report goes to press. What contribution can this report make to the debate over "property tax relief"? The report does provide some justification for a "circuit-breaker" type of legislation, especially a bill directed to providing relief for districts with high percentages of low valuation homes. Indirectly the report may also be thought of as providing some justification for lowering the ratio of assessed to market valuation from the present 33 1/3rd percent to some lower figure. If percent residential valuation has a depressing effect on district revenues, then this depressing effect might be lessened by moving to a fractional assessment lower than 33 1/3rd percent. Incidently, this report also provides some justification for the present "resource equalizer" type of grant-in-aid system from the point of view of property tax relief. The particular form of grant-in-aid system used in Illinois since 1973 provides greater state aid to districts with higher tax rates, all other variables remaining constant. This report shows that those high tax rate districts are also districts with high percentages of residential valuation. Viewed in this light, the system of state-aid passed in 1973 can be thought of as "aid to homeowners". It is to be hoped that more limited and selective approaches to "property tax relief", such as the circuit breaker approach and lowering the fractional assessment, will be given consideration on their merits in spite of the "bandwagon" effect created by the success of "proposition thirteen" in California. A hasty adoption of a general property tax limitation will not do anyone any good. There are several approaches to property tax relief and each deserves careful consideration.

APPENDIX A

STEPS TO TRANSLATE TOWNSHIP ASSESSED VALUATIONS BY CLASSIFICATION TO SCHOOL DISTRICT ASSESSED VALUATIONS BY CLASSIFICATION

I. Use Fifth Count reference list by Illinois School Districts as corrected January 1976 for Poverty data for IOE, Directory of Illinois Schools, and Fifth Count Medlist

A. Work by major county.

B. For the county, begin with the first school district (numerically). Enter name and number of school district from Directory of Illinois Schools, pp. 105-142, in column 2, "School District Name and Code."

C. For that school district, begin with the first township that lies partly within the school district. Enter name and MCD number of township from Fifth Count Medlist.

D. For that township, add the population segments and percents of segments of place names in the school district from the school district census printout. This is the urban population segment (U) of that township in that school district. Enter "U" and total figure in column 3, "School District Population Components."

E. For that township, add the population segments and percents of segments of remainders in the school district from the school district printout. This is the rural population segment (R) of that township in that school district. Enter "R" and total figure in column 3 beneath the "U" designation and figure.

F. Repeat 4 and 5 for each township in the school district, and for each school district in the county.

G. Computer program for steps A through F, Fortran language.

```
 1        URBTOT = 0.0
 2        RURTOT = 0.0
 3        KOLTSP = 030
 4        KOLSDT = 299
 5        KOLCTY = 016
 6        DO 2 I=1,7000,1
 7        READ (5,5) NTWNSP,NRORUB,KPOPUL,LEVEL,KPRCNT,NWCNTY,NSCDST
 8    2   CONTINUE
 9        DO 10 I=1,7000,1
10        READ (5,5) NTWNSP,NRORUB,KPOPUL,LEVEL,KPRCNT,NWCNTY,NSCDST
11    5   FORMAT(5X,13,14,40X,15,14X,11,2X,13,7X,13,13)
12    3   IF (LEVEL.NE.1)GO TO 10
13        IF (KOLSDT.NE.NSCDST) GO TO 20
14        IF (KOLTSP.NE.NTWNSP) GO TO 20
15        IF (KOLCTY.NE.NWCNTY) GO TO 20
16        IF (NRORUB.EQ.0000) GO TO 30
17        URBTOT=URBTOT+((KPOPUL*KPRCNT)*0.01)
```

```
      GO TO 10
30    RURTOT=RURTOT+((KPOPUL*KPRCNT)*0.01)
      GO TO 10
20    WRITE (6,50)KOLSDT,DOLTSP,KOLCTY,RURTOT,URBTOT
50    FORMAT(15X,I3,10X,I3,10X,I3,10X,F13.3,10X,F13.3)
      KOLSDT=NSCDST
      KOLTSP=NTWNSP
      KOLCTY=NWCNTY
      RURTOT=0.0
      URBTOT=0.0
      GO TO 3
10    CONTINUE
      STOP
      END
```

II. Use Number of Inhabitants, Illinois

A. Work by county on worksheet.

B. Beginning with first school district, and first township within the school district, determine total "U" (Urban) and total "R" (Rural) components of township, as follows, and enter in column 5, "Township Population Components":

1. Add population figures for villages and cities. This is the "U" (Urban) figure.

2. Subtract "U" from the township population figure. This is the "R" (Rural) figure.

3. Urban and Rural populations of all townships of five counties.

C. Tabled results appear in Appendix B, Township Population Components.

III. Population Percentages

A. Divide column 4 component by corresponding column 5 total component.

B. Enter percentages under column 6.

IV. Property Classification Percentages

A. Enter column 7 from township assessed valuation data.

B. Extend columns 8, 9, 10, 11 for school district.

C. Total columns 8, 9, 10, 11 for school district.

D. Verify total real estate of school district with total provided by Department of Local Government Affairs, Springfield, Illinois, courtesy Fred Spriet, Director.

E. Field check totals that vary significantly from DLGA's total of "lands" plus "lots".

F. Divide real estate classification total by school district real estate total.

V. Tabled results appear in Appendix C for Kane County Unit School Districts.

APPENDIX B

TOWNSHIP POPULATION COMPONENTS

Cook County
DeKalb County
DuPage County
Kane County
Lake County

TOWNSHIP POPULATION COMPONENTS
COOK COUNTY
Population: 5,492,369

Township Name	Urban Components	Rural Components	Total Township Population
Barrington	5,723	1,884	7,607
Berwyn	52,502	0	52,502
Bloom	90,841	3,916	94,757
Bremen	84,731	9,175	93,906
Calumet	23,611	3	23,614
Chicago city	3,366,957	0	3,366,957
Cicero	67,058	0	67,058
Elk Grove	72,893	6,749	79,642
Evanston	79,808	0	79,808
Hanover	32,174	1,976	34,150
Lemont	5,080	3,234	8,314
Leyden	89,039	10,754	99,793
Lyons	98,457	2,441	100,898
Maine	116,790	23,404	140,194
New Trier	64,462	903	65,365
Niles	111,167	30	111,197
Northfield	46,080	19,477	65,557
Norwood Park	29,047	1,900	30,947
Oak Park	62,511	0	62,511
Orland	9,919	5,109	15,028
Palatine	42,100	12,717	54,817
Palos	28,350	4,750	33,100
Proviso	170,750	2,011	172,761
Rich	41,930	2,871	44,801
River Forest	13,402	0	13,402
Riverside	18,475	0	18,475
Schaumburg	47,363	3,178	50,541
Stickney	38,036	3,716	41,752
Thornton	185,837	2,026	187,863
Wheeling	106,397	12,821	119,218
Worth	148,304	7,530	155,834
TOTALS	5,349,794	142,575	5,492,369

TOWNSHIP POPULATION COMPONENTS
DeKALB COUNTY
Population: 71,654

Township Name	Urban Components	Rural Components	Total Township Population
Afton	0	708	708
Clinton	990	601	1,591
Cortland	1,928	1,109	3,037
DeKalb	33,209	2,767	35,976
Franklin	1,138	812	1,950
Genoa	3,003	794	3,797
Kingston	481	866	1,347
Malta	961	571	1,532
Mayfield	0	766	766
Milan	0	461	461
PawPaw	0	481	481
Pierce	0	622	622
Sandwich	5,046	258	5,304
Shabbona	851	503	1,354
Somonauk	1,012	382	1,394
South Grove	0	605	605
Squaw Grove	1,053	717	1,770
Sycamore	6,196	2,326	8,522
Victor	0	437	437
TOTALS	55,868	15,786	71,654

TOWNSHIP POPULATION COMPONENTS
DuPAGE COUNTY
Population: 491,882

Township Name	Urban Components	Rural Components	Total Township Population
Addison	60,377	11,903	72,280
Bloomingdale	22,799	13,855	36,654
Downers Grove	66,738	26,161	92,899
Lisle	34,816	14,245	49,061
Milton	54,905	20,845	75,750
Naperville	9,411	3,617	13,028
Wayne	1,661	3,824	5,485
Winfield	16,777	6,224	23,001
York	109,421	14,303	123,724
TOTALS	376,905	114,977	491,882

TOWNSHIP POPULATION COMPONENTS
KANE COUNTY
Population: 251,005

Township Name	Urban Components	Rural Components	Total Township Population
Aurora	80,634	14,542	95,176
Batavia	9,878	3,440	13,318
Big Rock	0	1,349	1,349
Blackberry	1,043	1,407	2,450
Burlington	456	777	1,233
Campton	79	2,073	2,152
Dundee	32,076	2,499	34,575
Elgin	54,427	4,545	58,972
Geneva	9,870	917	10,787
Hampshire	1,611	906	2,517
Kaneville	0	870	870
Plato	75	1,232	1,307
Rutland	435	829	1,264
St. Charles	14,968	5,384	20,352
Sugar Grove	1,230	1,744	2,974
Virgil	660	1,049	1,709
TOTALS	207,442	43,563	251,005

TOWNSHIP POPULATION COMPONENTS
LAKE COUNTY
Population: 382,638

Township Name	Urban Components	Rural Components	Total Township Population
Antioch	5,099	6,540	11,639
Avon	17,854	2,099	19,953
Benton	5,524	8,074	13,598
Cuba	6,265	2,832	9,097
Deerfield	37,179	11	37,190
Ela	8,605	3,603	12,208
Fremont	9,510	2,676	12,186
Grant	7,450	3,557	11,007
Lake Villa	9,238	2,355	11,593
Libertyville	20,479	5,098	25,577
Newport	920	1,740	2,660
Shields	53,471	1,622	55,093
Vernon	8,131	4,704	12,835
Warren	9,560	6,731	16,291
Wauconda	6,855	3,639	10,494
Waukegan	73,509	3,171	76,680
West Deerfield	25,897	1,372	27,269
Zion	17,268	0	17,268
TOTALS	322,814	59,824	382,638

APPENDIX C

THE 1973 REFORM OF THE ILLINOIS GENERAL PURPOSE GRANT-IN-AID SYSTEM

Definitions and Formulae

The 1973 Reform of the Illinois General Purpose Grant-in-Aid System

Four funding options:

The Strayer-Haig Formula + 25% add-on
The Alternate Method + 25% add-on
The Flat Grant Formula + 25% add-on
The New Option: The Resource Equalizer Formula

A. Effort—is the district's tax rate for operating purposes; that is, the tax rate for all funds that spend money, not including debt service and capital improvements; this rate includes transportation tax rate.
The maximum rates for use in this formula are as follows:
$2.90/$100 assessed valuation for unit districts
1.90/$100 assessed valuation for elementary districts
1.05/$100 assessed valuation for high school districts

Reward for Effort; Equal Expenditure for Equal Effort:

(1) the State of Illinois matches the district's own tax rate within specified limits;
(2) maximum effort (tax rate) will yield combined state and local revenue of approximately $1260 per pupil;
(3) any two districts with the same tax rate (up to the matchable rates) will receive the same combined state and local revenue per pupil.

B. Equity—equal treatment of equals.

Equity among students—to have access to a minimum acceptable level of education, has been incorporated into Illinois' funding of its public schools for many years, and has been preserved in the current legislation.

Equity among taxpayers. It had become apparent that two taxpayers, living in different school districts, could be paying the same tax rate for local school taxes, but receiving very different levels of educational services; this situation has been remedied now within certain limits that will be described in detail.

C. Guaranteed Assessed Valuation—The State of Illinois pays that district tax rate times the amount of real estate assessed valuation that the district lacks of the guaranteed assessed valuation per pupil unit:

$43,500 for unit districts
66,300 for elementary districts
120,000 for high school districts

D. Pupil Count—the State of Illinois uses the District Title I count (the number of children ages five to seventeen for whom the district receives federal aid for Title I of the elementary and secondary education act) to calculate the pupil count in each district:

(1) WADA = the average daily membership of the district weighted for high school students (1.25) and kindergarten students (.50).

(2) TWADA = Title I Weighted Average Daily Attendance

(a) TWADA Formula for the Resource Equalizer:

$$TWADA = WADA_i + TI_i \frac{\frac{TI_i}{WADA_i}}{\frac{TI_s}{WADA_s}} .375$$ where

TI = Title I count; the number of children (5-17) receiving aid for families with dependent children

i = individual district subscript

s = state subscript

(b) TWADA Formula for the Strayer-Haig System:

TWADA = (District Title I eligibles x .45) + WADA

E. The Resource Equalizer Formula 58

$$G = TWADA \times T \times (AV_g - AV_i / TWADA)$$

G is the state grant

TWADA is the Title I Weighted Average Daily Attendance**

T is the district's tax rate for operating purposes; that is, the tax rate for all funds that spend money, not including debt service and capital improvements; this rate now includes transportation tax rate.

The maximum matchable rates for use in this formula are as follows:

$2.90/$100 assessed valuation for unit districts
1.90/ 100 assessed valuation for elementary districts
1.05/ 100 assessed valuation for high school districts

AV_g is the guaranteed assessed valuation per TWADA for each type of district as follows:

$43,500 for unit districts
66,300 for elementary districts
120,000 for high school districts

AV_i is the assessed valuation/TWADA in the individual district

$$**TWADA = WADA_i + TI_i \left[\frac{\frac{TI_i}{WADA_i}}{\frac{TI_s}{WADA_s}} \right] .375, \quad \text{where}$$

TI = Title I count

i = individual district
s = state

F. The Strayer-Haig System

G = Strayer-Haig TWADA x F - (T x AV), where

G is the state grant

TWADA = (District Title I eligibles x .45) + WADA

WADA is the average daily attendance weighted:

1.25 pupils in grades 9-12
1.00 pupils in grades 1-8
.50 pupils in kindergarten

F is the foundation level, $520

T is the qualifying operating tax rate:

$1.08/$100 for unit districts
.90/ 100 for dual districts with less than 100 WADA
.84/ 100 for dual districts with 100 or more WADA

AV is the district assessed valuation

ALTERNATE METHOD

G = (X - AV/TWADA) x $120 x Strayer-Haig TWADA, where

X is $47,619 for dual districts with 100 or more Strayer-Haig TWADA
$44,444 for dual districts with less than 100 Strayer-Haig TWADA
$37,037 for unit districts

FLAT GRANT FORMULA

G = Strayer-Haig TWADA x $48.00

APPENDIX D

HIGH SCHOOL DISTRICTS

Cook County
DuPage County
Lake County

I	Low residential percent (under 70%) Low residential value per TWADA	(under $20,000): n = 12
II	Low residential percent (under 70%) High residential value per TWADA	(over $20,000): n = 11
III	High residential percent (over 70%) Low residential value per TWADA	(under $20,000): n = 11
IV	High residential percent (over 70%) High residential value per TWADA	(over $20,000): n = 11

HIGH SCHOOL DISTRICTS

CELL I—low low
Assessed value, residential, less than $31,000 per TWADA, Percent residential greater than 70%

County		School District Name
Cook	204	Lyons
16	209	Proviso
	210	Lemont
	211	Township 211
	212	Leyden
	214	Township 214
	220	Reavis
DuPage	108	Lake Park
22		
Lake	125	Adlai E. Stevenson
49	126	Zion-Benton
	127	Grayslake
	128	Libertyville Comm.

CELL II—high low
Assessed value, residential, greater than $31,000 per TWADA, Percent residential less than 70%

County		School District Name
Cook	201	J. S. Morton
16	202	Evanston
	217	Argo
	219	Niles
DuPage	88	DuPage
22	94	West Chicago Comm.
	100	Fenton Comm.
Lake	117	Antioch
49	120	Mundelein
	121	Warren
	124	Grant Comm.

CELL III—low high
Assessed value, residential, less than $31,000 per TWADA, Percent residential greater than 70%

County		School District Name
Cook	205	Thornton
16	206	Bloom
	207	Maine
	215	Thornton Fractional
	218	Community
	227	Rich
	228	Biemen
	229	Oak Lawn
	231	Evergreen Park
	233	Homewood Flossmoor
	234	Ridgewood

CELL IV—high high
Assessed value, residential, greater than $31,000 per TWADA, Percent residential greater than 70%

County		School District Name
Cook	200	Oak Park & River For.
16	203	New Trier
	208	Riverside Brookfield
	225	Glenbrook
	230	Consolidated
DuPage	86	Hinsdale
22	87	Glenbard
	99	Downers Grove
Lake	113	Highland Park Twnp.
49	115	Lake Forest
	123	North Chicago Comm.

APPENDIX E

ELEMENTARY SCHOOL DISTRICTS

Cook County
DuPage County
Lake Coun[illegible]

I Low residential percent (under [illegible])
Low residential value
per TWADA (under $20,000): n = 45

II Low residential percent (under 70%)
High residential value
per TWADA (over $20,000): n = 44

III High residential percent (over 70%)
Low residential value
per TWADA (under $20,000): n = 42

IV High residential percent (over 70%)
High residential value
per TWADA (over $20,000): n = 49

ELEMENTARY SCHOOL DISTRICTS

CELL I—low low Assessed value, residential, less than $20,000 per TWADA, Percent residential less than 70%			CELL II—high low Assessed value, residential, greater than $20,000 per TWADA, Percent residential less than 70%		
County		School District Name	County		School District Name
Cook	54	Schaumburg	Cook	65	Evanston
16	59	Comm. Cons. School	16	67	Golf
	78	Rosemont Elementary		68	Skokie
	83	Mannheim		69	Skokie
	84	Franklin Park		70	Morton Grove
	84.5	Rhodes		71	Niles
	89	Maywood-Melrose Pk-Rdw.		72	Skokie Fairview
	92	Lindup		73	East Prairie
	93	Hillside		73.5	Skokie
	99	Cicero		74	Lincolnwood
	107	Pleasantdale		81	Schiller Park
	109	Common		85.5	River Grove
	110	Central Stickney		87	Berkeley
	111	South Stickney		88	Bellwood
	113	Lemont		91	Forest Park
	130	Blue Island		92	Lindup
	132	Calumet		95	Brookfield
	133	Gen. George Patton		101	Western Springs
DuPage	11	Medinah		102	LaGrange
22	15	Marquardt		103	Lyons
	20	Kenneyville		104	Summit
	25	Benjamin		105	LaGrange South
	63	Cass		106	LaGrange Highland
	65	Bromberek		108	Willow Springs
	66	Center Cass	DuPage	2	Bensenville
	68	Woodridge	22	4	Addison
	180	Palisades		7	Wood Dale
	181	Hinsdale		10	Alasen
Lake	3	Beach Park		12	Roselle
49	6	Zion		13	Bloomingdale
	10	Lotus		16	Queen Bee
	11	Newport		27	McAuley
	33	Emmons		33	West Chicago
	37	Gavin		44	Lombard
	38	Big Hollow		48	Salt Creek
	47	Avon Center		69	Puffer
	50	Woodland		93	Carol Stream
	65	Lake Bluff	Lake	24	Millburn
	68	Oak Grove	49	41	Lake Villa
	72	Libertyville		46	Grayslake
	73	Rondout		56	Gurnee
	79	Fremont		70	Libertyville
	96	Lake Zurich		76	Diamond Lake
	102	Abtakisic-Tripp			
	103	Lincolnshire-Prairiev.			

CELL III—low high
Assessed value, residential, less than $20,000 per TWADA, Percent residential more than 70%

County		School District Name
Cook	21	Wheeling
16	26	River Trails
	31	West Northfield
	63	East Maine
	97	Oak Park Elementary
	117	North Palos
	118	Palos
	122	Ridgeland
	125	Atwood Heights
	126	Alsip-Hazelgreen-Oaklawn
	127	Worth
	128	Palos Heights
	140	Kirby
	142	Forest Ridge
	143	Midlothian
	143.5	Posen-Zobbins
	144	Markham
	145	Arbor Park
	146	Tinley Park
	147	Harvey
	149	Dolton
	150	South Holland
	152	Harvey
	152.5	Hazelrest
	153	Homewood
	154	Thornton
	154.5	Burnham
	157	Hoover-Schrum Memorial
	158	Lansing
	159	Sieden Prairie
	160	Country Club Hills
	161	Flossmoor
	162	Matteson
	167	Brookwood
	168	Comm. Cons.
	169	East Chicago Heights
	170	Chicago Heights
	171	Sunnybrook
	172	Sandridge
DuPage		
22	60	Maereker
	89	Glen Ellyn

CELL IV—high high
Assessed value, residential, greater than $20,000 per TWADA, Percent residential more than 70%

County		School District Name
Cook	15	Palatine
16	23	Prospect Heights
	25	Arlington Heights
	27	Northbrook Elementary
	28	Northbrook Sch. 28
	29	Northfield
	30	Northbrook Sch. 30
	34	Glenview
	35	Glencoe
	36	Winnetka
	37	Avoca
	38	Kenilworth
	39	Wilmette
	62	DesPlaines
	64	Park Ridge
	79	Pennoyer
	80	Norridge
	86	Union Ridge
	99	River Forest
	94	Komarek
	98	Berwyn North
	100	Berwyn
	123	Oak Lawn-Hometown
	124	Evergreen Park
	127	Worth
	135	Orland Park
	148	Dolton
	151	South Holland
	156	Lincoln
	163	Park Forest
DuPage	34	Winfield
22	41	Glen Ellyn
	45	Villa Park
	53	Butler
	58	Downers Grove
	61	Darien
	62	Gower
Lake	1	Winthrop Harbor
49	34	Antioch
	36	Grass Lake
	64	North Chicago
	67	Lake Forest
	75	Mundelein
	106	Bannockburn
	107	Highland Park 107
	108	Highland Park 109
	109	Deerfield
	110	Deerfield-Riverwoods

APPENDIX F

UNIT SCHOOL DISTRICTS

Cook County
DeKalb County
DuPage County
Kane County
Lake County

I	Low residential percent (under 63%) Low residential value per TWADA	(under $10,000): n = 11
II	Low residential percent (under 63%) High residential value per TWADA	(over $10,000): n = 4
III	High residential percent (over 63%) Low residential value per TWADA	(under $10,000): n = 5
IV	High residential percent (over 63%) High residential value per TWADA	(over $10,000): n = 12

UNIT SCHOOL DISTRICTS

CELL I—low low
Assessed value, residential, less than $10,000 per TWADA, Percent residential less than 63%

County		School District Name
Cook 19	299	Chicago
	401	Elmwood
DeKalb 19	424	Genoa-Kingston
	425	Shabbona
	426	Hiawatha
	429	Hinckley-Big Rock
	431	Waterman
	432	Somonauk
	433	Malta
DuPage 22	204	Indian Prairie
Kane 45	301	Central Com. Unit

CELL II—high low
Assessed value, residential, greater than $10,000 per TWADA, Percent residential less than 63%

County		School District Name
DeKalb 19	427	Sycamore
	428	DeKalb Com. Unit
DuPage 22	203	Naperville
Lake 049	60	Waukegan

CELL III—low high
Assessed value, residential, less than $10,000 per TWADA, Percent residential greater than 63%

County		School District Name
DeKalb 019	430	Sandwich
Kane 045	46	Elgin
	300	Dundee
Lake 049	116	Round Lake
	220	Barrington

CELL IV—high high
Assessed value, residential, greater than $10,000 per TWADA, Percent residential greater than 63%

County		School District Name
DuPage 22	200	Wheaton
	201	Westmont
	202	Lisle
	205	Elmhurst
Kane 045	101	Batavia
	129	Aurora West
	131	Aurora East
	302	Kaneland
	303	St. Charles
	304	Geneva
Lake 049	118	Wauconda

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